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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,680	04/20/2001	Robin Speed	MS1-600US	1810
22801	7590	06/20/2007	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			CZEKAJ, DAVID J	
			ART UNIT	PAPER NUMBER
			2621	
			NOTIFICATION DATE	DELIVERY MODE
			06/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

Office Action Summary	Application No. 09/839,680	Applicant(s) SPEED ET AL.	
	Examiner Dave Czekaj	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

On page 13, applicant argues that Radha fails to disclose receiving an indication of first and second quantities of residual samples remaining on a per-region basis. While the applicant's points are understood, the examiner respectfully disagrees. The examiner relied upon Radha to generally show a type of indication. However, the examiner relied upon Takashima to disclose the indication as claimed. Therefore the rejection has been maintained.

On pages 13-14, applicant argues that Radha fails to disclose adding a first quantity of residual samples and a refined prediction value. While the applicant's points are understood, the examiner respectfully disagrees. See for example Radha figure 7. There Radha discloses an adder for adding an enhancement layer to a base layer, or first quantity of residual samples. Since the output of the addition produces a higher quality image, the output of the addition of the layers is the refined prediction value. Therefore the rejection has been maintained.

On page 14, applicant argues that Takashima fails to disclose one or more values associated with one or more picture level parameters. While the applicant's points are understood, the examiner respectfully disagrees. See for example Takashima column 2, lines 57-64. There Takashima discloses that a GOP comprises I, P, and B pictures. The number of the I, P, and B pictures currently processed is determined indicating one or more picture level parameters, the parameter being the remaining number of pictures to be processed. Takashima then discloses calculating

the residual bits, or one or more values, allocated to the current GOP. Therefore the rejection has been maintained.

On page 14, applicant argues that Rose fails to disclose subtracting the second quantity of samples from the refined prediction to generate a final representation. While the applicant's points are understood, the examiner respectfully disagrees. See for example Rose column 6, lines 11-35. There Rose discloses performing a subtraction to produce a residual value. This residual value is then fed to the reconstruction module. The reconstruction module processes the input signals and produces a final output value. Hence, the subtraction used to produce the residual value generates a final representation value. Therefore the rejection has been maintained.

On page 16, applicant challenges the Official Notice with respect to claims 4, 7, 12, and 18. Please note the rejection below.

On page 19, applicant argues that Radha fails to disclose an API coupling the decoder with the accelerator. While the applicant's points are understood, the examiner respectfully disagrees. See for example Radha column 9, lines 57-59. There Radha discloses receiving user input. The examiner notes that in order to receive user input into a computing system, an API must be present. Further, page 3 of applicant's specification discloses an accelerator as being a unit which executes computationally intensive but repetitive high rate operations such as motion compensation and IDCT. Hence, Radha illustrates in figure 10 an accelerator which performs the motion compensation and IDCT. Therefore the rejection has been maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radha et al. (6639943), (hereinafter referred to as "Radha") in view of Rose (6731811) in further view of Takashima (5754233).

Regarding claims 1, 8, 9, 10, and 19, Radha discloses an apparatus that relates to fine granular coding that includes both quality and temporal scalability (Radha: column 1, lines 11-13). This apparatus comprises "generating a motion compensated prediction of a region of content" (Radha: figure 7, column 7, lines 49-51, wherein the motion compensated prediction is generated by the motion estimation block, the region of content is the frames/streams), "receiving an indication of whether there are first and second quantities of residual samples remaining" (Radha: figures 5A and 8A, wherein the residual samples are contained with the enhancement and base layers, the indication is the process from moving from one layer to the next. The examiner notes that the apparatus would not move from one layer to the next without all necessary data needed for further processing. Therefore a move from one layer to the next would indicate whether there are first and second quantities of residual samples) and "adding the first quantity of residual samples to the prediction" (Radha: figure 7, column

3, lines 15-27). However, Radha fails to show the subtraction and the indication comprising values associated with picture level parameters as claimed. Rose teaches that prior art coding systems cause undesired conflicts when trying to take advantage of additional information available to the enhancement layer (Rose: column 2, lines 10-14). To help alleviate this problem, Rose discloses "subtracting the second quantity of residual samples from the refined prediction value to generate a final representation" (Rose: figure 5, wherein the second set of residual samples is the multiple enhancement layers). Takashima teaches that bit rate control operations become complex in prior art encoding systems (Takashima: column 3, lines 10-14). To help alleviate this problem, Takashima discloses an indicator "comprising one or more values associated with picture level parameters" (Takashima: figure 8, column 2, lines 57-64, wherein the picture level parameters is the picture type). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Radha, add the subtraction method taught by Rose, and add the processing taught by Takashima in order to obtain an apparatus that operates more efficiently by being able to take advantage of additional information given to a system without causing undesired conflicts/complexity.

Regarding claims 2 and 13, Radha discloses "the first and second residual samples are eight bit samples" (Radha: column 5, lines 37-45, wherein the pixel represents one byte or eight bits).

Regarding claims 3, 14, and 17, Radha discloses “performing an inverse discrete cosine transform of decoded transform domain representation of residual differences to be added to the motion compensated prediction” (Radha: figure 10, wherein the inverse discrete cosine transform is the inverse DCT, the addition is performed by the adder (item 58), and the motion compensated prediction is performed by the motion compensation block).

Regarding claims 4, 7, 12, and 18, Takashima discloses “the region is a block or macroblock” (Takashima: column 7, lines 30-39).

Regarding claims 5 and 16, Radha discloses “generating a prediction of media is performed by a graphics accelerator under the control of a decoder application” (Radha: figure 10, wherein the accelerator comprises the motion compensation and inverse DCT blocks).

Regarding claim 6, Radha discloses “sending prediction control information necessary for generation of a motion compensated prediction to the accelerator” (Radha: figure 10, wherein the accelerator comprises the motion compensation and inverse DCT blocks, the prediction control information is the enhancement and base layers and inverse quantization parameters), “sending an indication and the samples to the accelerator of whether the first and second samples are to be applied” (Radha: figures 5A and 8A, wherein the indication is the process from moving from one layer to the next indicating there are layers remaining), and “performing processing at the accelerator (Radha: figure 10,

wherein the accelerator comprises the motion compensation and inverse DCT blocks which perform processing of the samples).

Regarding claim 11, note the examiners rejection for claims 5 and 6.

Regarding claims 15 and 20, Radha discloses the complementary decoder performing the operations of the encoder disclosed in the preceding claims. The decoder also comprises an "application program interface" (Radha: column 9, lines 57-59, wherein the interface is the application that runs to obtain the user input).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

Art Unit: 2621

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJC

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